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<center>REMARKS</center>

Claims 3-5, 8-16, and 23-27 are all the claims presently pending in the application. Claims 3 and 27 have been amended to improve grammar, clarity, and consistency.

Entry of this amendment after final is appropriate and respectfully is requested. Claim amendments have been made to present rejected claims in better form for consideration on appeal, and so may be admitted. To the extent that an amendment presented touches the merits of the application, such may be admitted as necessary to clarify the claims. The amendment had not earlier been presented prior to further consideration in light of the Office's new grounds of rejection as provided in the outstanding action.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Applicant acknowledges and appreciates that claims 11-16 and 23-27 are allowed. For the reasons set forth below, however, Applicant respectfully submits that all of the pending claims are allowable over the prior art of record.

Claims 3 and 8 stand rejected under 35 U.S.C. 102(e) as being anticipated by Gelman et al. (US 6,493,348).

Claims 5 and 10 stand rejected under 35 U.S.C. 102(e) as being anticipated by Johnson (US 6,765,910).

Claims 4 and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gelman et al. in view of Johnson.

These rejections respectfully are traversed.

I. **THE CLAIMED INVENTION**

A. Claims 3 and 8:

Claim 3 recites a demultiplexing method of receiving a multiplexed signal. The multiplexed signal is obtained by multiplexing a plurality of communication signals from a multiplexed signal transmitting section, demultiplexing the multiplexed signal into communication signals, and transmitting the demultiplexed communication signals to a communication signal receiving section. The method of receiving a multiplexed signal

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includes adding an identification address to each of the plurality of communication signals. The identification address is preassigned to a predetermined signal identifying section, through which a communication signal passes in a multiplexing system including the multiplexed signal transmitting section and the communication signal receiving section. The method of receiving a multiplexed signal also includes outputting each of the communication signals, extracting the identification address from each of the output signals, and demultiplexing the multiplexed signal for each of the communication signals on the basis of the extracted identification address.

Claim 8 recites a demultiplexing apparatus which is connected to a multiplexed signal transmitting section through a multiplex communication path. The demultiplexing apparatus demultiplexes a multiplexed signal received from the multiplex communication path, and transmits demultiplexed communication signals to a communication signal receiving section through communication paths for the respective communication signals. The demultiplexing apparatus includes address extracting means, connected to the multiplex communication path, for extracting an identification address added to each of the communication signals in the multiplexed signal received from the multiplex communication path. The identification addresses added are preassigned to a predetermined signal identifying section, through which a communication signal passes in a demultiplexing section including said multiplexed signal transmitting section and said communication signal receiving section. The demultiplexing apparatus also includes demultiplexing means for demultiplexing the multiplexed signal into the respective communication signals on the basis of the identification addresses of the respective communication signals which are extracted by the address extracting means.

B. Claims 5 and 10:

Claim 5 recites a demultiplexing method of demultiplexing a multiplexed signal obtained by multiplexing a plurality of packets into packets. The method includes extracting an IP address from each packet in the received multiplexed signal, and demultiplexing the multiplexed signal into PPP packets on the basis of the extracted IP addresses.

Claim 10 recites a demultiplexing apparatus which is connected to a multiplex communication path through which a multiplexed signal, obtained by multiplexing packets addressed to subscriber apparatuses, is transmitted. The demultiplexing apparatus demultiplexes the multiplexed signal received from the multiplex communication path, and

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outputs each demultiplexed communication signal. The demultiplexing apparatus includes
address extracting means, connected to the multiplex communication path, for
extracting an IP address of each packet in the multiplexed signal received from the
multiplex communication path, and demultiplexing means for demultiplexing the multiplexed
signal into the respective packets on the basis of the IP addresses of the respective packets
extracted by the address extracting means.

II.   THE PRIOR ART REJECTIONS

   A.   Claims 3 and 8 stand rejected under 35 U.S.C. 102(e) as being anticipated by
Gelman et al. (US 6,493,348).

1. The rejection fails as a matter of law:

   The Office alleges that Gelman et al. anticipates claims 3 and 8. Applicant submits,
however, that there are elements of the claimed invention which are not taught by Gelman et
al.

   To anticipate a claim, a reference must teach every element of the claim. "A claim is
anticipated only if each and every element as set forth in the claim is found, either expressly
or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of
California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical
invention must be shown in as complete detail as is contained in the ... claim." *Richardson v.
Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The
elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test,
i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566
(Fed. Cir. 1990).

   The Office has not established that every element of claims 3 and 8 is contained in
Gelman et al. Consequently, the rejection of claims 3 and 8 based on Gelman et al. fails as a
matter of law.

2. The rejection fails as a matter of fact:

   The proposed rejection based on anticipation fails as a matter of fact. Every element
of claims 3 and 8 is not found in Gelman et al. Gelman et al. does not show the identical
invention in as complete detail as is contained in the claims. Further, any elements that
arguably may be shown in Gelman et al. are not arranged as required by the claims.

   The Office alleges, for claims 3 and 8, that Gelman et al. discloses a demultiplexing
method of receiving a multiplexed signal obtained by multiplexing a plurality of

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communication signals from a multiplexed signal transmitting section, demultiplexing the signal into communication signals, and transmitting the demultiplexed communication signal to a communications signal receiving section. The method allegedly disclosed by Gelman et al. comprises adding, to each of the communication signals, an identifications address preassigned to a predetermined signal identifying section, through which a communications signal passes in a multiplexing system, including the multiplexed signal transmitting section and the communication signal receiving section. The method taught by Gelman et al. also includes, allegedly, outputting each of the communication signals, extracting the identification address from the output signal(s), and demultiplexing the multiplexed signal for each of the communications signals on the basis of the extracted identification address.

By way of explaining the pertinence of the reference with respect to claims 3 and 8, the Office references FIG. 2 of Gelman et al., and contends that "a MAC layer address is assigned and used as identification address and each signal is demultiplexed at the DSLAM to reach their destination using the MAC address." See paragraph 2, beginning on page 2 of the Detailed Action.

Applicant notes, however, that the Office has not established that Gelman et al. teaches every element of claims 3 and 8. As noted above, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Moreover, the Office has not established that Gelman et al. shows the identical invention as claimed in as complete detail as is recited in the claim. Further, the Office has not established that the elements are arranged as required by the claims.

More specifically, the Office has not established, and Gelman et al. does not teach or suggest, a method, as recited in claim 3, of receiving a multiplexed signal that includes, for example, adding an identification address to each of the plurality of communication signals, outputting each of the communication signals, extracting the identification address from each of the output signals, and demultiplexing the multiplexed signal for each of the communication signals on the basis of the extracted identification address. For analogous reasons, Gelman et al. also does not teach or suggest a demultiplexing apparatus as recited in claim 8.

Instead, Gelman et al. discloses that, "under the architecture of FIG. 1, the DSLAMs functionality are [sic] limited to providing transport and multiplexing functions." Gelman et al. states further that the "IP edge routers, in addition to the IP routing mechanism, provide

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the Ethernet bridging capability order to be able to address the user's LANs." Applicant
notes that FIGS. 1 and 2 of Gelman et al. relate to the same, conventional architecture, as
described in Gelman et al. from column 1, line 25 to column 4, line 65. Thus, Gelman et al.
does not teach or suggest the present invention as recited in claims 3 and 8.

B. Claims 5 and 10 stand rejected under 35 U.S.C. 102(e) as being anticipated by
Johnson (US 6,765,910).

1. The rejection fails as a matter of law:

The Office alleges that Johnson anticipates claims 5 and 10. Applicant submits,
however, that there are elements of the claimed invention which are not taught by Johnson.

As noted above, to anticipate a claim, a reference must teach every element of the
claim. "A claim is anticipated only if each and every element as set forth in the claim is
found, either expressly or inherently described, in a single prior art reference." *Verdegaal
Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir.
1987). "The identical invention must be shown in as complete detail as is contained in the ...
claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed.
Cir. 1989). The elements must be arranged as required by the claim, but this is not an
ipsissimis verbis test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831,
15 USPQ2d 1566 (Fed. Cir. 1990).

The Office has not established that every element of claims 5 and 10 is contained in
Johnson. Consequently, the rejection of claims 5 and 10 based on Johnson fails as a matter of
law.

2. The rejection fails as a matter of fact:

The proposed rejection based on anticipation fails as a matter of fact. Every element
of claims 5 and 10 is not found in Johnson. Johnson does not show the identical invention in
as complete detail as is contained in the claims. Further, any elements that arguably may be
shown in Johnson are not arranged as required by the claims.

The Office contends, for claims 5 and 10, that Johnson discloses demultiplexing a
multiplexed signal obtained by multiplexing a plurality of packets into packets. The
demultiplexing allegedly comprises extracting an IP address from each packet in the received
multiplexed signal, and demultiplexing the multiplexed signal into PPP packets on the basis
of the extracted IP addresses.

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The Office contends that the reference is pertinent to the method of claim 5 and the apparatus of claim 10 because, citing column 8, lines 22-40 of Johnson, the "router examines the contents of the PPP stream, selectively separates certain packets and forwards them on to selected servers using layer addressing information (IP address) embedded in the packet headers."

Applicant notes, however, that the Office has not established that Johnson teaches every element of claims 5 and 10. As noted above, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. Moreover, the Office has not established that Johnson shows the identical invention as claimed in as complete detail as is recited in the claims. Further, the Office has not established that the elements are arranged as required by the claims.

More specifically, the Office has not established, and Johnson does not teach or suggest, a method, as recited in claim 5, of demultiplexing a multiplexed signal obtained by multiplexing a plurality of packets into packets, the method including extracting an IP address from each packet in the received multiplexed signal, and demultiplexing the multiplexed signal into PPP packets on the basis of the extracted IP addresses. For analogous reasons, Johnson also does not teach or suggest a method as recited in claim 10.

Instead, Johnson discloses, for example, that switch router 30 examines the contents of the PPP stream, selectively separates certain packets out of the PPP stream when it detects packets that are intended for a server 24, and forwards them only to the intended server 24. See Johnson at column 8, lines 26-30. Johnson does not teach or suggest the invention recited in claims 5 and 10.

C. Claims 4 and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gelman et al. (US 6,493,348) in view of Johnson (US 6,765,910).

1. The rejection fails as a matter of law:

The Office has not established *prima facie* obviousness with respect to the rejected claims 4 and 9. In order to established *prima facie* obviousness under 35 U.S.C. § 103(a), the secondary prior art reference must suggest the claim limitations missing from the primary reference. See MPEP 2142.

> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference

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> teachings. Second, there must be a reasonable expectation of success.
> Finally, the prior art reference (or references when combined) must teach or
> suggest all the claim limitations. The teaching or suggestion to make the
> claimed combination and the reasonable expectation of success must both be
> found in the prior art, and not based on applicant's disclosure. *In re Vaeck*,
> 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added.)

There is no motivation or suggestion, in the cited reference nor in the knowledge generally available to one of ordinary skill in the art, to modify the reference. There is no reasonable expectation of success, since, for example, Gelman et al. and Johnson teach away from the proposed combination.

2. The rejection fails as a matter of fact:

The cited references to Gelman et al. and Johnson do not teach or suggest all the claim limitations.

The Office alleges, for claims 4 and 9, that Gelman et al. discloses a method, discussed further above, in which the identification address includes a MAC address. Gelman et al. does not disclose the communication signal including a PPP packet created for each Internet subscriber apparatus. The Office further contends that Johnson discloses a communication signal including a PPP packet created for each Internet subscriber apparatus.

The Office alleges further that Johnson is pertinent in this regard because packets arriving at the router from a server are formatted into the PPP format and inserted into the PPP stream. The Office also contends that it would have been obvious to one of ordinary skill in the art to implement the communication signal of Johnson into the method of Gelman et al., and that the motivation for implementing this communication signal as taught by Johnson into the method of Gelman et al. would be to set up a direct communication link between the source and destination.

Applicant notes that claims 4 and 9 depend, respectively, from claims 3 and 8. Moreover, claims 3 and 8 are patentable over Gelman et al. Consequently, dependent claims 4 and 9 also are patentable over Gelman et al.

Johnson has not been asserted against independent claims 3 and 8. In any event, Johnson does not remedy the deficiencies of Gelman et al. discussed above with respect to claim 3 and 8.

Claims 3 and 8 are patentable over the proposed combination of Gelman et al. and Johnson. Claims 4 and 9, being dependent on claims 3 and 8, respectively, similarly are patentable over the cited prior art references to Gelman et al. and Johnson.

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The Examiner is requested to withdraw these rejections and to permit claims 3-5 and 8-10 to pass to allowance.
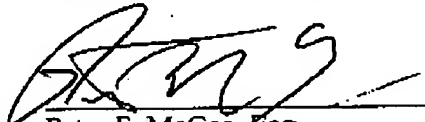
III. CONCLUSION

In view of the foregoing, Applicant submits that claims 3-5, 8-16, and 23-27, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: 27 Aug 2007

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